Electrolytic Decalcifying Solution

**In-vitro diagnostic medical device**

**CND Code: W01030799**

<table>
<thead>
<tr>
<th>Catalog number</th>
<th>Unit size</th>
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</thead>
<tbody>
<tr>
<td>05-M03004</td>
<td>500 ml</td>
</tr>
<tr>
<td>05-03004Q</td>
<td>4 x 2.5 l</td>
</tr>
</tbody>
</table>

**Packaging**

- **05-M03004**  
  Primary container: white bottle in High Density Polyethylene (HDPE). Useful capacity 500 ml. HDPE cap. Tamper evident cap.

- **05-03004Q**  
  Primary container: white bottle in polyethylene terephthalate (PET). Useful capacity 2.5 liters. HDPE cap. Tamper evident cap.

The polyethylenterephthalate is a thermoplastic polymer of the polyester family. PET is an optimal oxygen, carbon dioxide and other gasses barrier. This material has a high resistance to ultraviolet radiation and an inertia toward the mainly chemical agents (solvents: xylene, limonene, liquid paraffines, alcohols, acids, bases etc.). It is biologically inert. It constitutes a good water and humidity barrier. It shows a great hardness and mechanical resistance. The bottle has an optimal grip. The absence of the handles reduces space for storage. The anti-dropping cap permits a precise and clean use.

Secondary container: carton box.

Wear, water, alcohol and solvents resistant PVC label. Scratchproof ink resistant to water and alcohol.

**Expected aim**

Product for the preparation of cyto-histological samples for optical microscopy.

**Application**

Rapid decalifier, based on hydrochloric and formic acid. It acts on all mineralized tissues: compact bone, concretions or calcareous deposits in fleshy tissue. A saline corrector has been added to check tissue swelling caused by acid substances.

**Principle**

At the base of the demineralization process is the chemical reaction between the tissue calcium (mainly in the form of carbonate, phosphate, oxalate and urate) and hydrochloric acid and formic acid contained in the decalifier solution.

\[
\begin{align*}
\text{CaCO}_3 (\text{insoluble}) &+ 2 \text{HCl} = \text{CaCl}_2 (\text{soluble}) + \text{H}_2\text{CO}_3 \\
\text{CaCO}_3 (\text{insoluble}) &+ \text{HCOOH} = \text{Ca(HCOO)}_2 (\text{soluble}) + \text{H}_2\text{CO}_3
\end{align*}
\]

**Fixation technique**

1) Volume ratio specimen/decalifier 1 : 100
2) Procedure time 4 - 8 hours - < 5 mm thickness.
3) Post decalifying procedure: reconditioning of the sample. Rinse with slowly running water for 1 hour or apply 3 changes of PBS pH 7.4, 20 minutes each.

**Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS</th>
<th>CE</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid</td>
<td>7647-01-0</td>
<td>2315957</td>
<td>017-002-00-2</td>
</tr>
<tr>
<td>Formic Acid</td>
<td>64-18-6</td>
<td>2005791</td>
<td>607-001-00-0</td>
</tr>
<tr>
<td>Saline Corrector</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Deionized water</td>
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**Warning and precaution**

The product must be used exclusively by specialized technical operators. Carefully read the information on the classification of dangerous substances on the label. Always refer to the safety data sheet where are available the information on the risks presented by the mixture, the precautionary measures during use, the measures first aid and the intervention in the event of accidental release.

Do not use if the primary container is damaged.

Storage
Store the preparation at room temperature. Keep the containers tightly closed.

Stability
After the first opening, the product is usable until the expiry date, if correctly stored. Validity: 2 years.

Disposal
Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.

Date of issue: July 2013